Grindstone Lake

2010 DATA

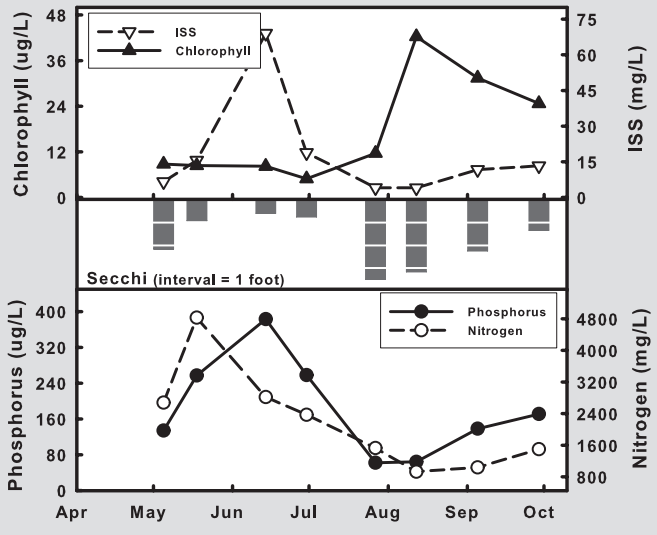
Dekalb County
Latitude: 39.7744 Longitude: -94.2952

Date	5/5	5/18	6/14	6/30	7/27	8/12	9/5	9/29	Mean
Secchi (inches)	26	11	7	9	42	38	27	16	18
TP (µg/L)	134	257	383	258	62	64	138	171	154
TN (µg/L)	2680	4830	2820	2370	1530	930	1040	1500	1929
CHL (µg/L)	8.8	8.4	8.2	4.9	11.6	42.3	31.4	24.7	13.5
ISS (mg/L)	6.6	15.6	69.0	18.8	4.1	4.0	11.7	13.3	11.7

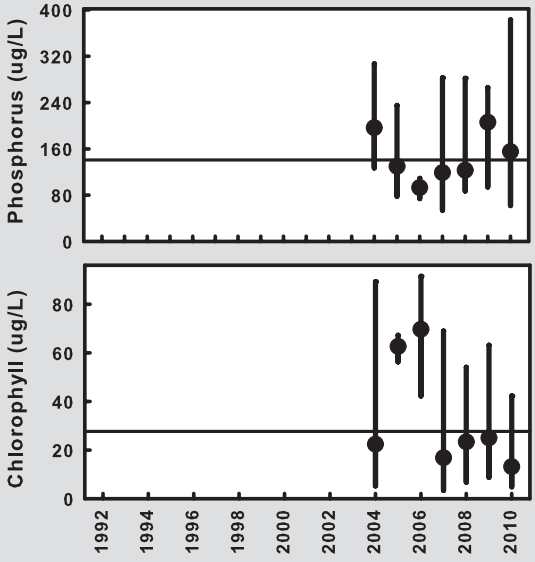
The two nutrients follow similar seasonal patterns, though nitrogen peaks in the middle of May while phosphorus reaches its maximum in mid-June. Both nutrients decrease through the summer with a slight increase during the last two sampling dates. The same general pattern is observed in the inorganic suspended sediment data. In contrast, the seasonal pattern of algal chlorophyll was the reverse of suspended sediment, remaining low early in the season and peaking in August when suspended sediment values were at their lowest. The deepest Secchi transparency reading came in late July, when both suspended sediment and chlorophyll were relatively low.

Summertime chlorophyll levels have been comparable during all years with the exception of 2005 & 2006, when average chlorophyll concentrations were notably higher. In most Missouri lakes high chlorophyll concentrations would directly relate to either higher nutrient levels or lower inorganic suspended sediment values (lower sediment levels would increase light availability). This was not the case in Grindstone Lake, where neither increased nutrient levels or decreased suspended sediment accompanied the higher chlorophyll levels.

2010 GRAPHS



TREND GRAPHS



See pages 10-11 for help interpreting graphs